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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------|---------------------|------------------|
| 10/595,144 | 03/03/2006 | Ross Campbell McKinlay | MIDL0101PUSA | 3316 |

22045 7590 02/06/2009
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| EXAMINER |
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HOLLOWAY, JASON R

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| ART UNIT | PAPER NUMBER |
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3633

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| MAIL DATE | DELIVERY MODE |
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02/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/595,144 | Applicant(s) MCKINLAY ET AL. | |
| | Examiner JASON HOLLOWAY | Art Unit 3633 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>29 June 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is a first Office Action Non-Final rejection on the merits.

Claims 1-16 are currently pending and have been considered below.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters the reference characters used in figures 3-9 all appear to be the same elements, however at least two sets of reference characters are provided which confuses the scope of the drawings and the invention. For example, the magnetized flexible gasket is designated as 44 in figure 3 and 83 in figure 9. These abnormalities are especially apparent between figures 3 and figures 8-9.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the perforations between mounting surfaces must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of

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any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 43 in figure 3.

3. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The "perforations located between mounting surfaces" are not described in the drawings and are insufficiently described in the specification.

Claim Objections

5. Claim 5 is objected to because of the following informalities: The recitation “sealed prior to the welding of the frame” is a method step, however claim 5 is an apparatus claim. An apparatus claim depends only on the final product and not the steps used to achieve that final product.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4 and 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Crandell (6,886,297).

Regarding claim 1, Crandell teaches a substantially planar insulating panel comprising:

a frame defining a periphery of the panel (sash frame 25 of figure 1);

a first wall (sheet 120) retained by the frame and a second wall (sheet 124)

opposing the first wall and together with the first wall and the frame defining an enclosed internal space of the panel (as illustrated in figures 6A and 6b);

at least one intermediate insulating wall (sheet 122 of figures 6A and 6B) disposed in the internal space intermediate the first and second wall members and which creates a first enclosed space in the internal space between the insulating wall and the first wall and a second enclosed space in the internal space between the insulating wall and the second wall (as illustrated in figures 6A and 6B, two internal spaces are formed by the three sheets 120, 122 and 124), wherein the insulating wall (122) insulates the first wall (120) from the second wall (124) (by definition, sheet 122 is an insulating wall between the two outer walls);

the frame comprising an extruded profile (column 8 lines 15-21 teach the sash can be extruded);

the profile having a series of spaced mounting surfaces (grooves 114, 116 and 118 of figures 6A receive and retain the sheets) which receive and retain the walls, the mounting surfaces arranged in a cascading series such that the areas of the walls diminish sequentially in one direction from one side of the panel to the other and the walls are sequentially spaced apart from each other (as illustrated in figures 6A and 6B, the walls are arranged in a cascading style as claimed by Applicant).

Regarding claim 2, Crandell teaches the frame is a unitary structure and wherein the extruded profile of the frame is miter jointed to form a continuous profile having no mechanical start or end point (column 5 lines 37-42 teach a unitless window sash which is connected using mitered corners; as illustrated in figures 1, 3 and 7)

Regarding claim 3, Crandell teaches the miter joints in the frame are welded (column 2 lines 25-29 teach the sash member ends can be welded).

Regarding claim 4, Crandell teaches the frame profile in section has at least one cavity for the retention of a moisture-absorbent desiccant material (column 6 line 66 to column 7 line 7 teaches a desiccant material can be placed between the panels 120 and 122).

Regarding claim 13, Crandell teaches the frame is formed from a thermal plastics material (column 8 lines 3-21 and 44-47 teach a plastic sash can be used to improve thermal performance).

Regarding claim 14, Crandell teaches the walls are of glass or thermal plastics planes (column 1 lines 6-10 teaches glass sheets).

Regarding claim 15, Crandell teaches method for constructing a substantially planar insulating panel including a frame in which is disposed two walls defining an internal space (as illustrated in figures 6A and 6B, a frame is provided with walls which provide an internal space);

the internal space including at least one internal insulating wall (sheet 122) which insulates the two outer walls (120 and 124) thereby reducing or eliminating condensation on the outer walls of the frame;

the method comprising the steps of:

- a. providing two walls (120, 124) of a predetermined size (the examiner construes since the walls are required to fit into a frame, the wall sizes are predetermined);
- b. providing an insulating wall member (sheet 122 is provided);

c. constructing a frame (sash frame 25 of figures 1, 3 and 7) having a series of spaced mounting surfaces which receive and retain walls (grooves 114, 116 and 118 of figure 6A receive and retain the sheets), the mounting surfaces arranged in a cascading series such that the areas of the walls diminish sequentially in one direction from one side of the panel to the other and the walls are sequentially spaced apart from each other (as illustrated in figures 6A and 6B, the walls are arranged in a cascading style as claimed by Applicant).;

d. fitting the first, second and insulating walls in an opposing relationship to the inner mounting surfaces (grooves 114, 116 and 118 of figures 6A) of the frame 9as illustrated in figures 6A and 6B ;

Regarding claim 16, Crandell teaches the further step of placing the insulating wall member at an optimum spacing and equidistant from the first and second walls (figures 6A and 6B illustrated sheets which are equidistant from one another, the examiner construes this spacing is optimal).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-8 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roche et al. (here forth Roche) (6,401,399) in view of Crandell (6,886,297).

Regarding claim 1, Roche teaches a substantially planar insulating panel comprising:

a frame defining a periphery of the panel (frame F of figures 1 and 2);

a first wall (inner lite 17) retained by the frame and a second wall (outer lite 19) opposing the first wall and together with the first wall and the frame defining an enclosed internal space (sealed air spaces 23b) of the panel (as illustrated in figure 3);

at least one intermediate insulating wall (the middle lite 18 by definition is an insulating wall since it is blocking the air between lites 17 and 19) disposed in the internal space intermediate the first (17) and second (19) wall members and which creates a first enclosed space in the internal space between the insulating wall and the first wall and a second enclosed space in the internal space between the insulating wall and the second wall, wherein the insulating wall insulates the first wall from the second wall (as illustrated in figure 3);

the frame comprising an extruded profile (spacer S is an extruded member; as illustrated in figure 3; column 13 lines 1-2);

the profile having a series of spaced mounting surfaces which receive and retain the walls (surfaces 21a receive the walls),

However, Roche fails to disclose the mounting surfaces arranged in a cascading series such that the areas of the walls diminish sequentially in one direction from one side of the panel to the other and the walls are sequentially spaced apart from each other.

Crandell teaches a unitless window sash having three sheets arranged in a cascading manner as claimed by applicant.

Therefore, from the teaching of Crandell, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the mounting system and glass lites of Roche in a cascading configuration as disclosed in Crandell in order to provide for easier installation.

Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the mounting surfaces in a cascading formation since it is notoriously known in the art to provide glazing panels in a cascade formation (see References Cited by the Examiner). Further, it would have been obvious to provide the panels in a cascading formation since it has been held that "matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art." (In re Seid, 161 F.2d 229, 73 USPQ 431 (CCPA 1947)).

Regarding claim 2, Roche teaches the frame is a unitary structure and wherein the extruded profile of the frame is miter jointed to form a continuous profile having no mechanical start or end point (See column 5 lines 47-52 for description of a continuous structure connected by miter joints).

Regarding claim 3, Roche teaches the miter joints in the frame are connected together, however, Roche fails to disclose they are connected by welding.

Crandell teaches a window sash having welded miter joints (column 2 lines 25-29 teach the sash member ends can be welded).

Therefore, from the teaching of Crandell, it would have been obvious to one of ordinary skill in the art at the time the invention was made to weld the miter connections of Roche as taught by Crandell in order to provide a stronger connection between miter joints.

Regarding claim 4, Roche teaches the frame profile in section has at least one cavity (hollow interior 24) for the retention of a moisture-absorbent desiccant (24a) material (figure 3 illustrates two cavities retaining desiccant material).

Regarding claim 5, Roche teaches the cavities (24) are sealed, however, fails to disclose the cavities are sealed prior to the welding of the frame. The patentability of a product does not depend on its method of production. For example, the recitation “the cavity sealed prior to the welding of the frame” discloses a method step of producing the apparatus. Thus, since claim 5 is an apparatus claim and Roche discloses the final product of the claim, the limitations of the claim are met.

Further, it would have been obvious to one of ordinary skill in the art to seal the cavity prior to welding the frame in order to prevent impurities from the welding process from entering the cavity and contaminating the panels.

Regarding claim 6, Roche teaches the frame profile in elevation has perforations (slots 24b) located between the mounting surfaces (21a) such that the cavities (hollow bodies 24) are in communication with the first and/or second enclosed spaces, such that the perforations allow for the absorption of moisture only from an apposing enclosed space (as illustrated in figure 3; column 5 lines 35-42).

Regarding claim 7, Roche teaches the frame profile in section has cavities (hollow bodies 24) capable of providing insulation (the hollow bodies 24 are capable of this function and therefore meet the limitations of the claim).

Regarding claim 8, Roche teaches the walls (17-19) are affixed to the mounting surfaces (21a) using an adhesive and chemical bonding (column 12 lines 60-67).

However, Roche fails to disclose the adhesive is rigid or semi-rigid and has either ultraviolet-setting or thermo-setting properties.

It would have been obvious to one of ordinary skill in the art to use an adhesive as claimed by applicant since the adhesive types as claimed are an obvious design choice and well known in the art.

Regarding claim 13, Roche teaches the frame is formed from a thermal plastics material (the frame is made of polyurethane, which is a known thermal plastic).

Regarding claim 14, Roche teaches the walls (17-19) are of glass or thermal plastics planes (see abstract for teaching of glass walls).

Regarding claim 15, Roche teaches a method for constructing a substantially planar insulating panel including a frame in which is disposed two walls defining an internal space (as addressed in claim 1);

the internal space including at least one internal insulating wall which insulates the two outer walls thereby reducing or eliminating condensation on the outer walls of the frame (as addressed in claim 1);

the method comprising the steps of:

a. providing two walls of a predetermined size (lites 17 and 19; the examiner construes since the walls are required to fit into a frame, the wall sizes are predetermined);

b. providing an insulating wall member (middle lite as addressed in claim 1);

c. constructing a frame having a series of spaced mounting surfaces which receive and retain walls, the mounting surfaces arranged in a cascading series such that the areas of the walls diminish sequentially in one direction from one side of the panel to the other and the walls are sequentially spaced apart from each other (see claim 1 rejection for cascading feature rejection);

d. fitting the first wall to an inner mounting surfaces of the frame (as illustrated in figure 3, the first wall is fitted to the frame);

e. fitting the insulating member to a second mounting surface on the frame in a central position relative to the outside surfaces of the frame (as illustrated in figure 3, the middle wall is fitted to the frame); and

f. fitting the second wall to a third mounting surface of the frame such that the walls are in opposing relationship and define the internal space housing the insulating member (as illustrated in figure 3, the outer wall is fitted to the frame and opposes the internal wall and a first wall).

Regarding claim 16, Roche teaches the further step of placing the insulating wall member (18) equidistant from the first and second walls (as illustrated in figure 3,

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the three walls are equidistant). It would have been obvious to one of ordinary skill in the art to optimize the spacing between the walls for the best insulating qualities.

10. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roche et al. (6,401,399) in view of Richardson et al. (here forth Richardson) (5,910,083).

Regarding claim 9, Roche teaches the walls (17-19) are affixed to the mounting surfaces (21a) with an adhesive (as illustrated in figure 3; adhesive described in column 12 lines 60-67).

However, Roche fails to disclose mounting surfaces have one or more recesses which act as traps for any excess adhesive used in affixing the walls.

Richardson teaches a spacer for a refrigerator door having a recess (ridge 104) that acts as a trap for excess adhesive (column 8 lines 61-67).

Therefore, from the teaching of Richardson, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wall receiving surfaces of Roche to include a ridge for recess as disclosed by Richardson in order to provide a passage for excess adhesive to travel.

Regarding claim 10, Roche teaches the first and/or second enclosed spaces are sealed and filled with air, argon gas, foam or another insulating material (column 11 lines 37-39 teach the enclosed spaces can be filled with argon gas).

Regarding claim 11, Roche teaches the frame includes a gasket-retaining groove (flexible magnetic strip holder 20) capable of retaining a magnetized flexible

sealing gasket which provides an airtight seal between the panel and an article to which the panel is fitted (as described in column 4 lines 57-65).

Regarding claim 12, Roche teaches the frame profile includes a keyway for insertion and mounting of a hinge (as illustrated in figures 8, 9 and 9A, the examiner construes a keyway via hinge pin 40 and the opening therefore is provided for the hinge connection).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON HOLLOWAY whose telephone number is (571) 270-5786. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on 571-272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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